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| 10/538,942 | 06/13/2005 | Mariko Takahashi | 1163-0529PUS1 | 5937 |

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| EXAMINER | |
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| ABDI, AMARA | |

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 10/538,942 | TAKAHASHI ET AL. | |
| | **Examiner** | **Art Unit** | |
| | Amara Abdi | 2624 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *11 September 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-26* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-26* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *06/13/2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

## DETAILED ACTION

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on September 11, 2008 has been entered.

2. Applicant's response to the last office action, filed September 11, 2008 has been entered and made of record.

3. Applicant's arguments with respect to claims 1-13 have been considered but are moot in view of the new ground(s) of rejection.

### ***Specification***

4. The specification is objected to because it does not contain the limitations: "second input chromaticity range", "second output chromaticity range" of the amended claim 8, and the limitations: "third input chromaticity", "third output chromaticity" of the amended claim 9.

### ***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claims 8, 9-11 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

(a) Claim 8, recites the limitations: "second input chromaticity range", "second output chromaticity range". The specification has no support for these limitations. Therefore, these two limitations are considered as a new matter.

(b) Claim 9, recites the limitations: "third input chromaticity", "third output chromaticity". The specification has no support for these limitations. Therefore, these two limitations are considered as a new matter.

## ***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. Claims 1-4, 12-17, and 25-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Komatsu et al. (JP 2000-022978) in view of Yamada (JP 05-061952).

***(1) Regarding claim 1:***

Komatsu et al. disclose a color correction apparatus (see the Abstract, line 1-2) comprising:

a color corrector (Fig. 2) that makes a color correction to an input image signal (see the Abstract, line 6-8, and paragraph [0003], line 17-18); and

a color gamut compressor (208 in Fig. 2) that performs color gamut compression on the color-corrected input image signal (see the Abstract, line 8-16, and paragraph [006], line 9-21) based on data describing color reproduction characteristics (see the Abstract, line 10-14) so that the color-corrected image data outputted from said color corrector has a chromaticity range which is contained in a color reproduction region (see the Abstract, line 16-19, and paragraph [0006], line 14-17) which is based on said color reproduction characteristics (see the Abstract, line 18-19), wherein:

said color gamut compressor determines a hue of the image data converted by said color corrector (paragraph [0006], line 17-18).

However, Komatsu et al. do not mention explicitly the acquiring of both an input chromaticity range from the input image signal based on the data describing the color reproduction characteristics, the input chromaticity range indicating the color reproduction characteristics corresponding to a hue of the input image signal; and an output chromaticity range based on the data describing the color reproduction characteristics, the output range indicating the color reproduction characteristics corresponding to the hue of the image data converted by the color corrector.

Yamada teaches the computing of the color reproduction range corresponding to the hue (paragraph [0007], lines 3-4), where acquiring both an input chromaticity range from the input image signal (chromaticity range from the data) (paragraph [0007], lines 7-8) based on the data describing the color reproduction characteristics (paragraph

[0007], lines 3-4), the input chromaticity range indicating the color reproduction characteristics corresponding to a hue of the input image signal (paragraph [0007], lines 4-8); and an output chromaticity range (output chrominance range signal for output device) (paragraph [0007], lines 9-10) based on the data describing the color reproduction characteristics (paragraph [0007], lines 3-4), the output range indicating the color reproduction characteristics corresponding to the hue of the image data converted by the color corrector (output device) (paragraph [0007], lines 4-10).

It is desirable to obtain color image output utilizing color reproduction range for an output device without impairing the gradation property of a color image. The Yamada's approach, where acquiring both of the input chromaticity and the output chromaticity is to achieve this goal. Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention, to apply the Yamada's teaching, where acquiring both of the input chromaticity and the output chromaticity, with the Komatsu et al. color correction teaching, because such combination obtains color image output utilizing color reproduction range for an output device without impairing the gradation property of a color image (see the Abstract, lines 1-3).

***(2) Regarding claim 14:***

Komatsu et al. disclose a color correction apparatus (see the Abstract, line 1-2) comprising:

a color corrector (Fig. 2) that color-corrects an input image signal (Abstract, line 6-8, and paragraph [0003], line 17-18);

a color gamut compressor (208 in Fig. 2); and compress a color gamut of the color-corrected image (see the Abstract, line 8-16, and paragraph [006], line 9-21) based on the data describing the color reproduction characteristics (see the Abstract, line 10-14), thereby establishing a chromaticity range for the gamut-compressed image signal such that said chromaticity range is contained in a color reproduction region (see the Abstract, line 16-19, and paragraph [0006], line 14-17) based on said color reproduction characteristics (see the Abstract, line 18-19).

However, Komatsu et al. do not explicitly mention the input acquire an input chromaticity range from the input image signal based on data describing color reproduction characteristics, said input chromatic range indicating said color reproduction characteristics corresponding to a hue of the input image signal; the determining of a hue of the color-corrected image signal; and output acquires an output chromaticity range based on the data describing the color reproduction characteristics, said output chromaticity range indicating those color reproduction characteristics that correspond to the determined hue of the color-corrected image signal.

Yamada teaches the input acquire an input chromaticity range from the input image signal (chromaticity range from the data) (paragraph [0007], lines 7-8) based on data describing color reproduction characteristics (paragraph [0007], lines 3-4), said input chromatic range (chromaticity range from the data) indicating said color reproduction characteristics corresponding to a hue of the input image signal (paragraph [0007], lines 4-8); determining of a hue of the color-corrected image signal (paragraph [0007], lines 3-4); and output acquires an output chromaticity range (output

chrominance range signal for output device) (paragraph [0007], lines 9-10) based on the data describing the color reproduction characteristics (paragraph [0007], lines 3-4), said output chromaticity range indicating those color reproduction characteristics that correspond to the determined hue of the color-corrected image signal (output device) (paragraph [0007], lines 4-10).

It is desirable to obtain color image output utilizing color reproduction range for an output device without impairing the gradation property of a color image. The Yamada’s approach, where acquiring both of the input chromaticity and the output chromaticity is to achieve this goal. Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention, to apply the Yamada's teaching, where acquiring both of the input chromaticity and the output chromaticity, with the Komatsu et al. color correction teaching, because such combination obtains color image output utilizing color reproduction range for an output device without impairing the gradation property of a color image (see the Abstract, lines 1-3).

***(2)Regarding claims 2 and 15:***

Komatsu et al. further disclose a color correction apparatus (see the Abstract, line 1-2), wherein said color corrector is provided with a color reproduction corrector converts (see the Abstract, line 10-14) that converts a chromaticity range of the input image signal (paragraph [0006], line 14-17) based on the data describing the color reproduction characteristics (paragraph [0006], line 21-23).

***<u>(3)Regarding claims 3 and 16:</u>***

Komatsu et al. further disclose a color correction apparatus (see the Abstract, line 1-2), wherein said color corrector is provided with a hue converter that converts a hue of the input image signal (paragraph [0006], line 16-18, and paragraph [0011], line 18-21) based on data describing the hue to be converted and an amount of adjustment (paragraph [0006], line 21-22).

***<u>(4)Regarding claims 4 and 17:</u>***

Komatsu et al. further disclose a color correction apparatus (see the Abstract, line 1-2), wherein said color gamut compressor (paragraph [0006], line 9-11) performs the color gamut compression on the color-corrected input image signal (paragraph [0006], line 14-18) based on data describing color reproduction characteristics of a color image display apparatus (see the Abstract, line 11-14, and paragraph [0006], line 21-23).

***<u>(5) Regarding claims 12 and 25:</u>***

Komatsu et al. disclose a color correction apparatus (see the Abstract, line 1-2).

However, Komatsu et al. do not explicitly mention the color correction apparatus comprising the saturation conversion means for converting a saturation of an input image signal based on both color adjustment data describing both a hue to be saturation-converted and an amount of adjustment, and color reproduction characteristics data describing color reproduction characteristics of a color image display apparatus

Yamada teaches the color correction apparatus comprising the saturation conversion means for converting a saturation of an input image signal (gamma 1) based on both color adjustment data describing both a hue to be saturation-converted and an amount of adjustment (paragraph [0007], lines 3-10), and color reproduction characteristics data describing color reproduction characteristics of a color image display apparatus (paragraph [0007], lines 3-4), (the saturation of the input chrominance is read as gamma 1, and the saturation of the output chrominance is read as gamma 2).

It is desirable to obtain color image output utilizing color reproduction range for an output device without impairing the gradation property of a color image. The Yamada's approach, where converting a saturation of an input image to a saturation of the output image is to achieve this goal. Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention, to apply the Yamada's teaching, where converting a saturation of an input image to a saturation of the output image, with the Komatsu et al. color correction teaching, because such combination obtains color image output utilizing color reproduction range for an output device without impairing the gradation property of a color image (see the Abstract, lines 1-3).

***(6) Regarding claims 13 and 26:***

Komatsu et al. disclose a color correction (see the Abstract, line 1-2) method (paragraph [0007], line 18) comprising:

converting a hue indicated by image data using a hue converter (paragraph [0006], line 16-18, and paragraph [0011], line 18-21);

converting a value indicated by the image data acquired from said hue converter using a value converter (paragraph [0006], line 16-18, and paragraph [0011], line 18-21), (the converting of a value indicated by the image data is read as the same concept as the converting of hue indicated by image data);

converting a saturation indicated by the image data acquired from said value converter based on color reproduction characteristics data describing color reproduction characteristics of a color image display apparatus using a saturation converter (paragraph [0006], line 16-20); and

carrying out color gamut compression (see the Abstract, line 8-16, and paragraph [006], line 9-21) so that the image data acquired from said saturation converter has a chromaticity range which is contained in a color reproduction region (see the Abstract, line 16-19, and paragraph [0006], line 14-17) which is based on said color reproduction characteristics (see the Abstract, line 10-14) using a color gamut compressor (see the Abstract, line 8-16, and paragraph [006], line 9-21), wherein said color gamut compressor determines a hue of the image data converted by said color corrector (paragraph [0006], line 17-18).

However, Komatsu et al. do not mention explicitly the acquiring of both an input chromaticity range from the input image signal based on the data describing the color reproduction characteristics, the input chromaticity range indicating the color reproduction characteristics corresponding to a hue of the input image signal; and an output chromaticity range based on the data describing the color reproduction

characteristics, the output range indicating the color reproduction characteristics corresponding to the hue of the image data converted by the color corrector.

Yamada teaches the computing of the color reproduction range corresponding to the hue (paragraph [0007], lines 3-4), where acquiring both an input chromaticity range from the input image signal (chromaticity range from the data) (paragraph [0007], lines 7-8) based on the data describing the color reproduction characteristics (paragraph [0007], lines 3-4), the input chromaticity range indicating the color reproduction characteristics corresponding to a hue of the input image signal (paragraph [0007], lines 4-8); and an output chromaticity range (output chrominance range signal for output device) (paragraph [0007], lines 9-10) based on the data describing the color reproduction characteristics (paragraph [0007], lines 3-4), the output range indicating the color reproduction characteristics corresponding to the hue of the image data converted by the color corrector (output device) (paragraph [0007], lines 4-10).

It is desirable to obtain color image output utilizing color reproduction range for an output device without impairing the gradation property of a color image. The Yamada's approach, where acquiring both of the input chromaticity and the output chromaticity is to achieve this goal. Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention, to apply the Yamada's teaching, where acquiring both of the input chromaticity and the output chromaticity, with the Komatsu et al. color correction teaching, because such combination obtains color image output utilizing color reproduction range for an output device without impairing the gradation property of a color image (see the Abstract, lines 1-3).

9. Claims 5-11, and 18-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Komatsu et al. and Yamada, as applied to claims 1 and 14 above, and further in view of Lida (US-PGPUB 2003/0164968).

***(1) Regarding claims 5 and 18:***

The combination Komatsu et al. and Yamada teach the parental claim 1.

However, the combination Komatsu et al. and Yamada do not explicitly mention the determining of a convergence point from both a color reproduction region.

Lida teaches the use an HVC color space (paragraph [0156], line 4-5), (the use of HVC color space permits to determine the convergence point from both color reproduction).

It is desirable to achieve a color conversion process, which reproduces colors so that color conversion results look the same, even when output gamuts have different shapes upon color conversion for converting an input color signal into an output color signal. The Lida's approach, where using HVC color space to determine the convergence point from both color reproduction is to achieve this goal. Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention, to apply the Lida's teaching of an HVC color space, with the combination Komatsu et al. and Yamada, to determine the convergence point from both color reproduction, because such feature may achieves a color conversion process, which reproduces colors so that color conversion results look the same, even when output gamuts have different shapes upon color conversion for converting an input color signal into an output color signal (paragraph [0032], line 3-7).

***(2) Regarding claims 6 and 19:***

The combination Komatsu et al. and Yamada teach the parental claim 5.

However, the combination Komatsu et al. and Yamada do not explicitly mention the color space, and the determining of point of intersection where the color reproduction region for the hue of the input image signal and the color reproduction signal for the hue of the converted image data intersect in a plane showing value and saturation, and determining a convergence point having a value equal to that of the point of intersection and being on a value axis showing the color space.

Lida teaches the determining of the intersection coordinates (paragraph [0174], line 1-3), and using HVC space as for the hue mapping (step 1103) and HVC space as for the saturation level of mapping points (paragraph [0156], line 1-7, and paragraph [0157], line 1-12), (the mapping points is read as the same concept as determining the convergence points).

It is desirable to achieve a color conversion process, which reproduces colors so that color conversion results look the same, even when output gamuts have different shapes upon color conversion for converting an input color signal into an output color signal. The Lida's approach, where using HVC space as for the hue mapping is to achieve this goal. Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention, to apply the Lida's teaching the use of an HVC color space as for the hue mapping, with the combination Komatsu et al. and Yamada, because such feature may achieves a color conversion process, which reproduces colors so that color conversion results look the same, even when output gamuts have

different shapes upon color conversion for converting an input color signal into an output color signal (paragraph [0032], line 3-7).

***(7) Regarding claims 7 and 20:***

The combination Komatsu et al. and Yamada teach the parental claim 5.

However, the combination Komatsu et al. and Yamada do not explicitly mention the color space, and the determining of point of intersection where the color reproduction region for the hue of the input image signal and the color reproduction signal for the hue of the converted image data intersect in a plane showing value and saturation, and determining a convergence point having a value equal to that of the point of intersection and being on a value axis showing the color space, and defining an arbitrary point on a straight line connecting the point of intersection with the output chromaticity range.

Lida teaches the determining of the intersection coordinates (paragraph [0174], line 1-3), and using HVC space as for the hue mapping (step 1103) and HVC space as for the saturation level of mapping points (paragraph [0156], line 1-7, and paragraph [0157], line 1-12), (the mapping points is read as the same concept as determining the convergence points), and defining an arbitrary point on a straight line connecting the point of intersection with the output chromaticity range (paragraph [0157], line 1-12), (the use of mapping process makes it possible to define an arbitrary point on a straight line connecting the point of intersection with the chromaticity range).

It is desirable to achieve a color conversion process, which reproduces colors so that color conversion results look the same, even when output gamuts have different

shapes upon color conversion for converting an input color signal into an output color signal. The Lida's approach, where using HVC color space is to achieve this goal. Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention, to apply the Lida's teaching the use of an HVC color space, with the combination Komatsu et al. and Yamada, because such feature may achieves a color conversion process, which reproduces colors so that color conversion results look the same, even when output gamuts have different shapes upon color conversion for converting an input color signal into an output color signal (paragraph [0032], line 3-7).

***<u>(4) Regarding claims 8 and 21:</u>***

The combination Komatsu et al. and Yamada teach the parental claim 1.

Furthermore, Komatsu et al. teach the compressing the color reproduction region defined by the second input chromaticity range signal (chromaticity range from the data) (see the Abstract, line 8-16, and paragraph [006], line 9-21).

And yet, Yamada teaches the acquiring of a second input chromaticity range (I 2) (paragraph [0022], lines 1-3) indicating first color reproduction characteristics of a hue of the input image signal (paragraph [0007], lines 4-8) based on data indicating the first color reproduction characteristics and describing color reproduction characteristic of a color image display apparatus (paragraph [0007], lines 3-4; and acquiring a second output chromaticity range (O2) (paragraph [0022], lines 4-5) indicating second color reproduction characteristics data of a hue indicated by the image data converted by said color corrector (output device) (paragraph [0007], lines 4-10), based on data indicating the second color reproduction characteristic and describing color reproduction

characteristics of an original image showing a color tone of a visually-identified image (paragraph [0007], lines 3-4), and compressing the color reproduction region defined by the second input chromaticity range toward the convergence point.

(the limitations:" *second* input chromaticity" and "*second* output chromaticity" have not been given a weight in the claim, since they are considered as a new matter).

However the combination Komatsu et al. and Yamada do not explicitly mention the showing of a color tone of visually-identified image, and the acquiring of convergence point from both a color reproduction region defined by the input chromaticity range, and a color reproduction region defined by the output chromaticity range.

Lida teaches the showing of a color tone of visually-identified image (Fig. 27, paragraph [0214], lines 3-7), and the acquiring of convergence point from both a color reproduction region defined by the input chromaticity range, and a color reproduction region defined by the output chromaticity range by using an HVC color space (paragraph [0156], line 4-5), (the use of HVC color space permits to determine the convergence point from both color reproduction).

It is desirable to achieve a color conversion process, which reproduces colors so that color conversion results look the same, even when output gamuts have different shapes upon color conversion for converting an input color signal into an output color signal. The Lida's approach, where using HVC color space to determine the convergence point from both color reproduction is to achieve this goal. Therefore, it would have been obvious to one having ordinary skill in the art at the time of the

invention, to apply the Lida's teaching of an HVC color space, with the combination Komatsu et al. and Yamada, to determine the convergence point from both color reproduction, because such feature may achieves a color conversion process, which reproduces colors so that color conversion results look the same, even when output gamuts have different shapes upon color conversion for converting an input color signal into an output color signal (paragraph [0032], line 3-7).

***(5) Regarding claims 9 and 22:***

The combination Komatsu et al. and Yamada teach the parental claim 1. Furthermore, Komatsu et al. teach a correction apparatus (Komatsu: see the Abstract, line 1-2), wherein said color corrector acquires color adjustment data describing both a hue to be value-converted and an amount of adjustment for value (Komatsu: paragraph [0011], line 18-22), and has a value converter that converts a value indicated by the input image signal based on said color adjustment data (Komatsu: see the Abstract, line 6-8), and compressing the color reproduction region defined by the third input chromaticity range signal (chromaticity range from the data) (see the Abstract, line 8-16, and paragraph [006], line 9-21). (The "*third* input chromaticity" has not been given a weight, since it is considered as a new matter".

And yet, Yamada teaches the acquiring of third input chromaticity range (chromaticity range from the data) (Yamada: paragraph [0007], lines 7-8) indicating color reproduction characteristics of a hue of the input image signal based on the data describing the color reproduction characteristics (Yamada: paragraph [0007], lines 3-8), and the acquiring of a value-converted chromaticity range (output chrominance range

signal for output device) (Yamada: paragraph [0007], lines 9-10) with reference to a look-up table (the color reproduction range table) in which a hue value-converted (theta) by said value converter is described (Yamada: Fig. 2, paragraph [0014], lines 1-4)

However, the combination Komatsu et al. and Yamada do not explicitly mention the acquiring of a convergence point from both a color reproduction region defined by the third input chromaticity range and a color reproduction region defined by the value converted chromaticity range.

Lida teaches the acquiring of a convergence point from both a color reproduction region defined by the input chromaticity range and a color reproduction region defined by the value converted chromaticity range by using an HVC color space (paragraph [0156], line 4-5), (the use of HVC color space permits to determine the convergence point from both color reproduction).

It is desirable to achieve a color conversion process, which reproduces colors so that color conversion results look the same, even when output gamuts have different shapes upon color conversion for converting an input color signal into an output color signal. The Lida's approach, where using HVC color space to determine the convergence point from both color reproduction is to achieve this goal. Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention, to apply the Lida's teaching of an HVC color space, with the combination Komatsu et al. and Yamada, to determine the convergence point from both color reproduction, because such feature may achieves a color conversion process, which reproduces colors so that color conversion results look the same, even when output

gamuts have different shapes upon color conversion for converting an input color signal into an output color signal (paragraph [0032], line 3-7).

***(6) Regarding claims 10 and 23:***

The combination Komatsu et al. and Yamada teach the parental claim 9. Furthermore, Yamada teaches the use of look-up table (the color reproduction range table) (Yamada: Fig. 2, paragraph [0014], lines 1-4).

However, the combination Komatsu et al. and Yamada do not explicitly mention that the user selects the hue value.

Lida teaches the console that includes a mouse, keyboard, and the like, and is used by the user to input operations conditions (the operation condition includes the selecting of the hue value) (paragraph 0097], lines 1-5).

It is desirable to achieve a color conversion process, which reproduces colors so that color conversion results look the same, even when output gamuts have different shapes upon color conversion for converting an input color signal into an output color signal. The Lida's approach, where the user inputs operation conditions is to achieve this goal. Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention, to apply the Lida's teaching where the user inputs operation conditions, with the combination Komatsu et al. and Yamada, to determine the convergence point from both color reproduction, because such feature may achieves a color conversion process, which reproduces colors so that color conversion results look the same, even when output gamuts have different shapes upon color conversion for converting an input color signal into an output color signal (paragraph [0032], line 3-7).

***(7) Regarding claims 11 and 24:***

The combination Komatsu et al. and Yamada teach the parental claim 9.

(The limitation: "*third* input chromaticity" has not been given any weight in the claim, since it is considered as a new matter).

However, the combination Komatsu et al. and Yamada do not explicitly mention the use of color space to transform a value axis, and the acquiring of a convergence point on the value axis which is converted by the chromaticity range.

Lida teaches the use of HVC color space to transform a value axis (Fig. 15, paragraph [0176]), and the acquiring of a convergence point on the value axis which is converted by the chromaticity range (paragraph [0156], line 4-5), (the use of HVC color space permits to determine the convergence point on the value axis which is converted by the chromaticity range).

It is desirable to achieve a color conversion process, which reproduces colors so that color conversion results look the same, even when output gamuts have different shapes upon color conversion for converting an input color signal into an output color signal. The Lida's approach, where using HVC color space to determine the convergence point on the value axis which is converted by the chromaticity range is to achieve this goal. Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention, to apply the Lida's teaching, where using HVC color space to determine the convergence point on the value axis which is converted by the chromaticity range, with the combination Komatsu et al. and Yamada, because such feature may achieves a color conversion process, which reproduces colors so that color

conversion results look the same, even when output gamuts have different shapes upon color conversion for converting an input color signal into an output color signal (paragraph [0032], line 3-7).

## ***Contact Information:***

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Amara Abdi whose telephone number is (571)270-1670. The examiner can normally be reached on Monday through Friday 8:00 Am to 4:00 PM E.T..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jingge Wu can be reached on (571) 272-7429. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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